Baumer
Passion for Sensors

Incremental encoders

EExOG 9

Ex approval ATEX II 2 G Ex db eb IIC T5/T6 Gb and IECEx Ex db eb IIC T5/T6 Gb
120...5000 pulses per revolution

Overview

- Encoder incremental / ATEX / IECEx
- Optical sensing method
- ATEX II 2 G Ex db eb IIC T5/T6 Gb
- IECEx Ex db eb IIC T5/T6 Gb
- Robust light-metal housing
- Output stage HTL or TTL
- Output stage TTL with regulator UB 9...26 VDC
- Large terminal box, turn by 90°
- Optional: Cable gland M20x1.5 or M25x1.5

Technical data

Technical data - electrical ratings	
Voltage supply	9...30 VDC 5 VDC ±5 % 9...26 VDC
Consumption w/o load	≤100 mA
Pulses per revolution	120 … 5000
Phase shift	90 ° ±20°
Duty cycle	40…60 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤120 kHz (pulses ≤1250) ≤250 kHz (pulses >1250)
Output signals	K1, K2, K0 + inverted
Output stages	HTL TTL/RS422
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE ATEX IECEx
Technical data - mechanical design	
Size (flange)	ø115 mm
Shaft type	ø11 mm solid shaft

Technical data - mechanical design	
Admitted shaft load	≤200 N axial ≤350 N radial
Flange	EURO flange B10
Protection EN 60529	IP 56
Operating speed	≤6000 rpm (T5, mechanical) ≤4500 rpm (T6, mechanical)
Operating torque typ.	4 Ncm
Rotor moment of inertia	290 gcm²
Material	Housing: aluminium die-cast Shaft: stainless steel
Ambient temperature	-20...+55 °C (Extended temperature range on request)
Resistance	IEC 60068-2-6 Vibration 10 g, 50-2000 Hz IEC 60068-2-27 Shock 100 g, 6 ms
Corrosion protection	IEC 60068-2-52 Salt mist for ambient conditions C4 according to ISO 12944-2
Explosion protection	II 2 G Ex db eb IIC T5/T6 Gb Ex db eb IIC T5/T6 Gb
Connection	Terminal box
Weight approx.	3.5 kg

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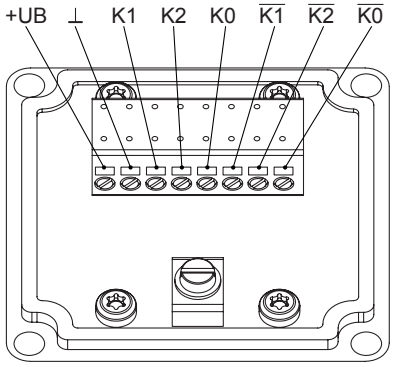
Terminal assignment

View A *(see dimension)*
Connecting terminal terminal box

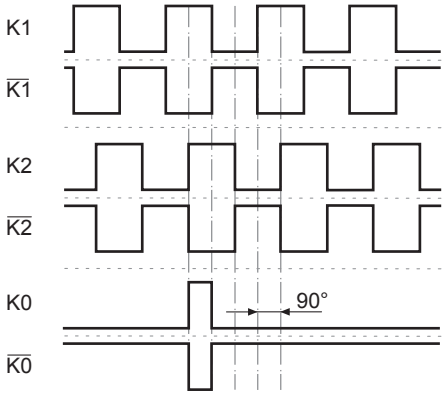


Terminal significance

+UB	Voltage supply
0V (⊥)	Ground
K1	Output signal channel 1
$\overline{K1}$	Output signal channel 1 inverted
K2	Output signal channel 2 (offset by 90° to channel 1)
$\overline{K2}$	Output signal channel 2 inverted
K0	Zero pulse (reference signal)
$\overline{K0}$	Zero pulse inverted

Output signals

HTL/TTL
At positive rotating direction *(see dimension)*



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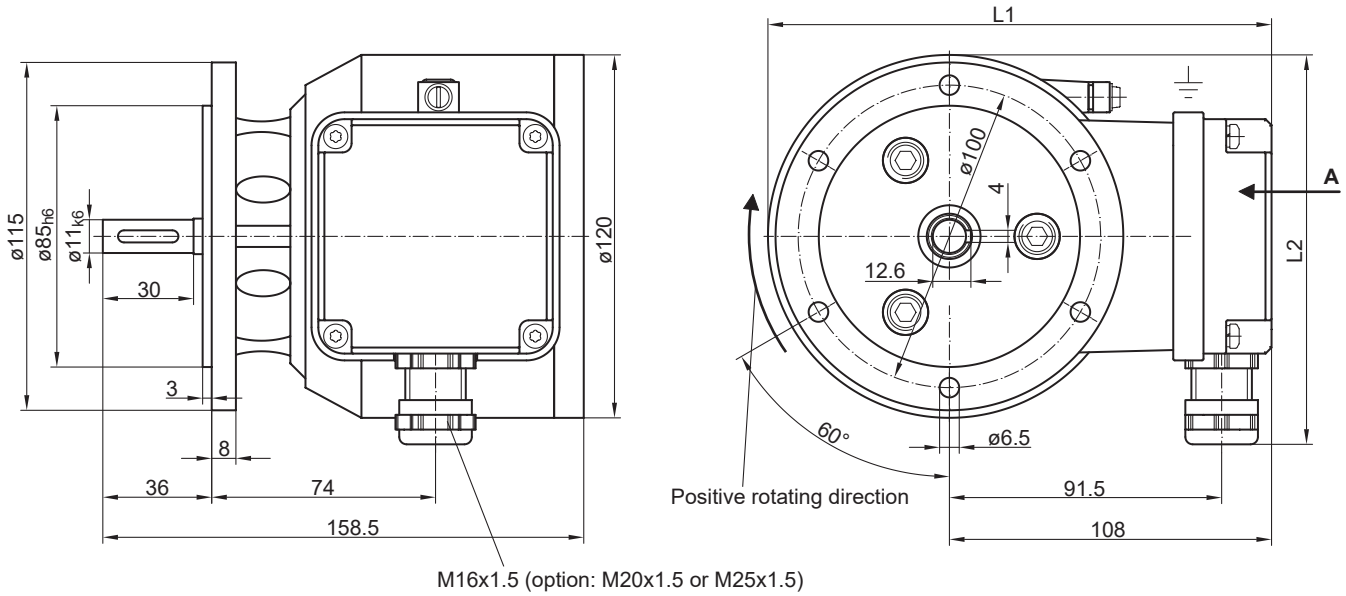
Dimensions



L1	L2	Cable gland
168	~125	M16x1.5
168	~145	M16x1.5 with extension on M20x1.5
168	~129	M20x1.5
168	~129	M20x1.5 with extension on M25x1.5

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Ordering reference

	EExOG9	DN	####	###
Product				
Incremental encoder	EExOG9			
Output signals				
K1, K2, K0		DN		
Pulse number				
120			120	
128			128	
180			180	
256			256	
360			360	
500			500	
512			512	
1000			1000	
1024			1024	
1250			1250	
2048			2048	
2500			2500	
3072			3072	
3600			3600	
4096			4096	
5000			5000	
Voltage supply / output stage				
9...30 VDC / output stage HTL with inverted signals				I
5 VDC / output stage TTL with inverted signals				TTL
9...30 VDC / output stage TTL with inverted signals				R

Accessories

Mounting accessories	
	Spring disk coupling K35 (shaft ø6...12 mm)
	Spring disk coupling K 50 (shaft ø11...16 mm)
11064874	Spring disk coupling K60 WD 11PF4 + 12PF4